

At-a-Glance Schedule



Conference on Uncertainty Quantification

February 27–March 1, 2024 • Trieste, Italy

Conference Venues

SAVOIA EXCELSIOR PALACE • Riva del Mandracchio, 4 • 34124 Trieste

STAZIONE MARITTIMA • Piazza Marinai d'Italia 1 • 34122 Trieste

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Sunday, February 25

5:00 p.m. – 8:00 p.m.

Badge Pickup and Information Desk
Hotel Savoia Excelsior Palace

Monday, February 26

4:30 p.m. – 7:30 p.m.

Badge Pickup and Information Desk
Hotel Savoia Excelsior Palace

Tuesday, February 27

7:30 a.m. – 5:30 p.m.

Badge Pickup and Information Desk
Stazione Marittima Foyer - 1st Floor

SIAM Bookstore
Stazione Marittima Foyer - 1st floor

8:30 a.m. – 9:30 a.m.

Opening Remarks and IP1: Opening Remarks and IP1: Semi-parametric Inference: A Bayesian Curse? Judith Rousseau, Université Paris Dauphine, France and University of Oxford, United Kingdom
Saturnia/Vulcania 1 - Stazione Marittima

9:30 a.m. – 10:00 a.m.

Coffee Break
Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco
Hotel Savoia Excelsior Palace - Ground and 1st Floor

10:00 a.m. – 12:00 p.m.

Concurrent Sessions

MT1 Principles of Data Assimilation and Sequential Inference

Saturnia/Vulcania 1 - Stazione Marittima

MS1 Advanced Surrogate Models and ROMs in PDEs and Physical Simulations - Part I of IV

Tergeste - Hotel Savoia Excelsior Palace

MS2 Quantifying Uncertainty in Kinetic and Hyperbolic PDEs: Numerical Insights

Oceania AB - Stazione Marittima

MS3 Uncertainty Quantification in Biomedical Applications, from Decision-Making to Phenotyping - Part I of II

Oceania C - Stazione Marittima

MS4 Novel Methods for Data Assimilation and Inverse Problems - Part I of II

Classica - Stazione Marittima

MS5 Nonlinear Approximation of High-Dimensional Functions: Compositional, Low-Rank and Sparse Structures - Part I of III

Marconi - Stazione Marittima

MS6 Operator Learning in Uncertainty Quantification - Part I of III

Zodiaco - Hotel Savoia Excelsior Palace

MS7 Generative Models for Physics-Based Forward and Inverse Problems - Part I of II

Imperatore - Hotel Savoia Excelsior Palace

MS8 Efficient Covariance and Operator Estimation

San Giusto - Hotel Savoia Excelsior Palace

MS9 Recent Advances on Quantifying Uncertainties in Kinetic Equations

Savoia - Hotel Savoia Excelsior Palace

MS10 UQ for Complex Simulations Involving Fluids, Structures, and Their Interactions - Part I of IV

Excelsior - Hotel Savoia Excelsior Palace

MS11 Uncertainty Quantification for Large-Scale Inverse Problems Governed by Dynamical Systems - Part I of II

Riviera - Hotel Savoia Excelsior Palace

MS12 Uncertainty Quantification for Complex Physical Systems - Part I of III

Sissi - Hotel Savoia Excelsior Palace

MS13 Recent Advances in Uncertainty Quantification for Scientific Machine Learning - Part I of III

Miramare - Hotel Savoia Excelsior Palace

MS14 Beyond Theory: UQ in High-Risk Applications - Part I of II

Atlantica - Hotel Savoia Excelsior Palace

MS15 Robustness Analysis of Uncertainty Quantification to Distribution Uncertainty

Mediterranea - Hotel Savoia Excelsior Palace

MS16 Advances at the Intersection of Probabilistic Machine Learning, Inverse Problems and Data Assimilation - Part I of II

Adriatica - Hotel Savoia Excelsior Palace

MS17 Forward and Inverse Uncertainty Quantification for Nonlinear Problems - Part I of II

Pacifica - Hotel Savoia Excelsior Palace

MS18 Uncertainty Quantification, Machine Learning, and Inverse Problems - Part I of III

Bellavista - Hotel Savoia Excelsior Palace

MS19 Advances at the Intersection of Machine Learning and Uncertainty Quantification - Part I of III

Marina - Hotel Savoia Excelsior Palace

MS20 Recent Advances in Scalable Active Learning and Optimal Experimental Design - Part I of II

Smeralda - Hotel Savoia Excelsior Palace

CP1 Contributed Paper Session

Belvedere - Hotel Savoia Excelsior Palace

CP2 Contributed Paper Session

Esperia - Stazione Marittima

12:00 p.m. – 1:30 p.m.

Lunch Break

1:30 p.m. – 2:15 p.m.

IP2 Exploiting Low-Dimensional Structure in Bayesian Inverse Problems Governed by Ice Sheet Flow Models

Noemi Petra, University of California, Merced, U.S.
Saturnia/Vulcania 1 - Stazione Marittima

2:15 p.m. – 2:30 p.m.

Intermission

Tuesday, February 27

2:30 p.m. – 4:30 p.m.

Concurrent Sessions

MT2 Multi-Fidelity Statistical Estimation and Surrogate Modeling

Saturnia/Vulcania 1 - Stazione Marittima

MS21 Advanced Surrogate Models and ROMs in PDEs and Physical Simulations - Part II of IV

Tergeste - Hotel Savoia Excelsior Palace

MS22 Efficient and Adaptive UQ for PDE Simulation and Stochastic Optimization - Part I of III

Oceania AB - Stazione Marittima

MS23 Uncertainty Quantification in Biomedical Applications, from Decision-Making to Phenotyping - Part II of II

Oceania C - Stazione Marittima

MS24 Novel Methods for Data Assimilation and Inverse Problems - Part II of II

Classica - Stazione Marittima

MS25 Nonlinear Approximation of High-Dimensional Functions: Compositional, Low-Rank and Sparse Structures - Part II of III

Marconi - Stazione Marittima

MS26 Operator Learning in Uncertainty Quantification - Part II of III

Zodiaco - Hotel Savoia Excelsior Palace

MS27 Generative Models for Physics-Based Forward and Inverse Problems - Part II of II

Imperatore - Hotel Savoia Excelsior Palace

MS28 Algorithms and Software for Large-Scale UQ - Part I of III

San Giusto - Hotel Savoia Excelsior Palace

MS29 Uncertainty Quantification for Active Learning in Atomistic Modeling

Savoia - Hotel Savoia Excelsior Palace

MS30 UQ for Complex Simulations Involving Fluids, Structures, and Their Interactions - Part II of IV

Excelsior - Hotel Savoia Excelsior Palace

MS31 Uncertainty Quantification for Large-Scale Inverse Problems Governed by Dynamical Systems - Part II of II

Riviera - Hotel Savoia Excelsior Palace

MS32 Uncertainty Quantification for Complex Physical Systems - Part II of III

Sissi - Hotel Savoia Excelsior Palace

MS33 Recent Advances in Uncertainty Quantification for Scientific Machine Learning - Part II of III

Miramare - Hotel Savoia Excelsior Palace

MS34 Beyond Theory: UQ in High-Risk Applications - Part II of II

Atlantica - Hotel Savoia Excelsior Palace

MS35 Advances in Sampling Methods for Sparsity-Promoting Bayesian Inversion - Part I of II

Mediterranea - Hotel Savoia Excelsior Palace

MS36 Advances at the Intersection of Probabilistic Machine Learning, Inverse Problems and Data Assimilation - Part II of II

Adriatica - Hotel Savoia Excelsior Palace

MS37 Forward and Inverse Uncertainty Quantification for Nonlinear Problems - Part II of II

Pacifica - Hotel Savoia Excelsior Palace

Tuesday, February 27

- MS38** Uncertainty Quantification, Machine Learning, and Inverse Problems - Part II of III
Bellavista - Hotel Savoia Excelsior Palace
- MS39** Advances at the Intersection of Machine Learning and Uncertainty Quantification - Part II of III
Marina - Hotel Savoia Excelsior Palace
- MS40** Recent Advances in Scalable Active Learning and Optimal Experimental Design - Part II of II
Smeralda - Hotel Savoia Excelsior Palace
- CP3** Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace
- CP4** Contributed Paper Session
Esperia - Stazione Marittima

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4:30 p.m. – 5:00 p.m.

Coffee Break
Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco
Hotel Savoia Excelsior Palace - Ground and 1st Floor

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5:00 p.m. – 7:00 p.m.

Concurrent Sessions

- MS41** Advanced Surrogate Models and ROMs in PDEs and Physical Simulations - Part III of IV
Tergeste - Hotel Savoia Excelsior Palace
- MS42** Efficient and Adaptive UQ for PDE Simulation and Stochastic Optimization - Part II of III
Oceania AB - Stazione Marittima
- MS43** Efficient Solution Schemes for Optimization of Complex Systems Under Uncertainty - Part I of III
Oceania C - Stazione Marittima
- MS44** Machine Learning for the Solution of the Forward and Inverse Problems in Complex and Multiscale Dynamical Systems - Part I of III
Classica - Stazione Marittima
- MS45** Nonlinear Approximation of High-Dimensional Functions: Compositional, Low-Rank and Sparse Structures - Part III of III
Marconi - Stazione Marittima
- MS46** Operator Learning in Uncertainty Quantification - Part III of III
Zodiaco - Hotel Savoia Excelsior Palace
- MS47** Optimal Transport for Uncertainty Quantification
Imperatore - Hotel Savoia Excelsior Palace
- MS48** Algorithms and Software for Large-Scale UQ - Part II of III
San Giusto - Hotel Savoia Excelsior Palace
- MS49** Quantifying Parameter Uncertainty in Random Differential Equations - Part I of III
Savoia - Hotel Savoia Excelsior Palace
- MS50** UQ for Complex Simulations Involving Fluids, Structures, and Their Interactions - Part III of IV
Excelsior - Hotel Savoia Excelsior Palace
- MS51** Computational Tools for Large-Scale Inverse Problems and UQ - Part I of III
Riviera - Hotel Savoia Excelsior Palace
- MS52** Uncertainty Quantification for Complex Physical Systems - Part III of III
Sissi - Hotel Savoia Excelsior Palace

Tuesday, February 27

- MS53** Recent Advances in Uncertainty Quantification for Scientific Machine Learning - Part III of III
Miramare - Hotel Savoia Excelsior Palace
- MS54** Statistical and Data-Assisted Modeling Approaches for Forecasting and Uncertainty Quantification of Complex Multiscale Systems in Real-World Applications - Part I of II
Atlantica - Hotel Savoia Excelsior Palace
- MS55** Advances in Sampling Methods for Sparsity-Promoting Bayesian Inversion - Part II of II
Mediterranea - Hotel Savoia Excelsior Palace
- MS56** Inverse UQ and Data Assimilation in Climate Modeling - Part I of III
Adriatica - Hotel Savoia Excelsior Palace
- MS57** Recent Advances in Multi-Fidelity Modeling
Pacifica - Hotel Savoia Excelsior Palace
- MS58** Uncertainty Quantification, Machine Learning, and Inverse Problems - Part III of III
Bellavista - Hotel Savoia Excelsior Palace
- MS59** CANCELLED - Advances at the Intersection of Machine Learning and Uncertainty Quantification - Part III of III
- MS60** Gradient Flows and Optimal Transport for Uncertainty Estimation in Probabilistic Modeling - Part I of II
Smeralda - Hotel Savoia Excelsior Palace
- MS218** Methods for Stochastic/Parametric Frequency-Domain and Spectral Problems - Part I of II
Saturnia/Vulcania 1 - Stazione Marittima
- CP5** Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace
- CP6** Contributed Paper Session
Esperia - Stazione Marittima

Wednesday, February 28

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7:30 a.m. – 5:00 p.m.

Badge Pickup and Information Desk
Stazione Marittima Foyer - 1st Floor

SIAM Bookstore
Stazione Marittima Foyer - 1st Floor

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8:30 a.m. – 10:30 a.m.

Concurrent Sessions

- MT3** Rare Event Estimation with PDE-Based Models
Saturnia/Vulcania 1 - Stazione Marittima
- MS61** Advanced Surrogate Models and ROMs in PDEs and Physical Simulations - Part IV of IV
Tergeste - Hotel Savoia Excelsior Palace
- MS62** Efficient and Adaptive UQ for PDE Simulation and Stochastic Optimization - Part III of III
Oceania AB - Stazione Marittima
- MS63** Efficient Solution Schemes for Optimization of Complex Systems Under Uncertainty - Part II of III
Oceania C - Stazione Marittima

Wednesday, February 28

- MS64** Machine Learning for the Solution of the Forward and Inverse Problems in Complex and Multiscale Dynamical Systems - Part II of III
Classica - Stazione Marittima
- MS65** Challenges in Inversion and Model Calibration: From UQ to OED - Part I of III
Marconi - Stazione Marittima
- MS66** Uncertainty Quantification, Robustness, and Trustworthiness in Foundation Models for Scientific Research and Beyond - Part I of II
Zodiaco - Hotel Savoia Excelsior Palace
- MS67** Deep Generative Model and Continuous Dynamical System in Probability Space
Imperatore - Hotel Savoia Excelsior Palace
- MS68** Algorithms and Software for Large-Scale UQ - Part III of III
San Giusto - Hotel Savoia Excelsior Palace
- MS69** Quantifying Parameter Uncertainty in Random Differential Equations - Part II of III
Savoia - Hotel Savoia Excelsior Palace
- MS70** UQ for Complex Simulations Involving Fluids, Structures, and Their Interactions - Part IV of IV
Excelsior - Hotel Savoia Excelsior Palace
- MS71** Computational Tools for Large-Scale Inverse Problems and UQ - Part II of III
Riviera - Hotel Savoia Excelsior Palace
- MS72** UQ for Linking Models in Digital Twins for Decision Support - Part I of II
Sissi - Hotel Savoia Excelsior Palace
- MS73** Role of Sparsity in Bayesian Uncertainty Quantification - Part I of II
Miramare - Hotel Savoia Excelsior Palace
- MS74** Statistical and Data-Assisted Modeling Approaches for Forecasting and Uncertainty Quantification of Complex Multiscale Systems in Real-World Applications - Part II of II
Atlantica - Hotel Savoia Excelsior Palace
- MS75** Bayesian Inverse Problems Governed by Partial Differential Equations - Part I of II
Mediterranea - Hotel Savoia Excelsior Palace
- MS76** Inverse UQ and Data Assimilation in Climate Modeling - Part II of III
Adriatica - Hotel Savoia Excelsior Palace
- MS77** New Approaches to UQ for Data-Driven Operators
Pacifica - Hotel Savoia Excelsior Palace
- MS78** Recent Advances in Surrogate Modeling for UQ of Large-Scale Simulations - Part I of III
Bellavista - Hotel Savoia Excelsior Palace
- MS79** Emulation of Computer Models with Multiple Levels of Uncertainty
Marina - Hotel Savoia Excelsior Palace
- MS80** Gradient Flows and Optimal Transport for Uncertainty Estimation in Probabilistic Modeling - Part II of II
Smeralda - Hotel Savoia Excelsior Palace
- CP7** Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace
- CP8** Contributed Paper Session
Esperia - Stazione Marittima

Wednesday, February 28 Wednesday, February 28 Wednesday, February 28

10:30 a.m. – 11:00 a.m.

Coffee Break

Stazione Marittima Foyer - 1st Floor and Upper

Foyer - 2nd Floor, Soppalco

Hotel Savoia Excelsior Palace - Ground and 1st

Floor

11:00 a.m. – 12:00 p.m.

IP3 Wasserstein Distributional Learning

Tian Zheng, Columbia University, U.S.

Saturnia/Vulcania 1 - Stazione Marittima

12:00 p.m. – 1:30 p.m.

JUQ Editorial Board Meeting

Zodiaco - Hotel Savoia Excelsior Palace

12:00 PM - 1:30 PM

Lunch Break

1:30 p.m. – 2:15 p.m.

IP4 Computational Hypergraph Discovery, a Gaussian Process Framework for Connecting the Dots

Houman Owhadi, California Institute of Technology, U.S.

Saturnia/Vulcania 1 - Stazione Marittima

2:15 p.m. – 2:30 p.m.

Intermission

2:30 p.m. – 4:30 p.m.

Concurrent Sessions

MS81 Advances in Data-Enhanced Modeling and Applications - Part I of II

Tergeste - Hotel Savoia Excelsior Palace

MS82 Stochastic Computing and Data Assimilation - Part I of II

Oceania AB - Stazione Marittima

MS83 Efficient Solution Schemes for Optimization of Complex Systems Under Uncertainty - Part III of III

Oceania C - Stazione Marittima

MS84 Machine Learning for the Solution of the Forward and Inverse Problems in Complex and Multiscale Dynamical Systems - Part III of III

Classica - Stazione Marittima

MS85 Challenges in Inversion and Model Calibration: From UQ to OED - Part II of III

Marconi - Stazione Marittima

MS86 Uncertainty Quantification, Robustness, and Trustworthiness in Foundation Models for Scientific Research and Beyond - Part II of II

Zodiaco - Hotel Savoia Excelsior Palace

MS87 Reduced Order Modeling, Learning, UQ, and Their Interaction - Part I of II

Imperatore - Hotel Savoia Excelsior Palace

MS88 Frequentist and Bayesian Approaches to Optimum Experimental Design - Part I of II

San Giusto - Hotel Savoia Excelsior Palace

MS89 Quantifying Parameter Uncertainty in Random Differential Equations - Part III of III

Savoia - Hotel Savoia Excelsior Palace

MS90 Robust UQ and Physical Sciences

Applications

Excelsior - Hotel Savoia Excelsior Palace

MS91 Computational Tools for Large-Scale Inverse Problems and UQ - Part III of III

Riviera - Hotel Savoia Excelsior Palace

MS92 UQ for Linking Models in Digital Twins for Decision Support - Part II of II

Sissi - Hotel Savoia Excelsior Palace

MS93 Role of Sparsity in Bayesian Uncertainty Quantification - Part II of II

Miramare - Hotel Savoia Excelsior Palace

MS94 Particle Methods for Parametric Estimation - Part I of III

Atlantica - Hotel Savoia Excelsior Palace

MS95 Bayesian Inverse Problems Governed by Partial Differential Equations - Part II of II

Mediterranea - Hotel Savoia Excelsior Palace

MS96 Inverse UQ and Data Assimilation in Climate Modeling - Part III of III

Adriatica - Hotel Savoia Excelsior Palace

MS97 Well-Posedness, Stability and Approximation of Bayesian Inverse Problems

Pacifica - Hotel Savoia Excelsior Palace

MS98 Recent Advances in Surrogate Modeling for UQ of Large-Scale Simulations - Part II of III

Bellavista - Hotel Savoia Excelsior Palace

MS99 Surrogate Modelling and Data-Driven Approaches for Uncertainty Quantification - Part I of III

Marina - Hotel Savoia Excelsior Palace

MS100 Uncertainty Quantification in

Astrodynamics

Smeralda - Hotel Savoia Excelsior Palace

CP9 Contributed Paper Session

Belvedere - Hotel Savoia Excelsior Palace

4:30 p.m. – 5:00 p.m.

Coffee Break

Stazione Marittima Foyer - 1st Floor and Upper

Foyer - 2nd Floor, Soppalco

Hotel Savoia Excelsior Palace - Ground and 1st

Floor

5:00 p.m. – 7:00 p.m.

Concurrent Sessions

MS101 Models, Methods, Computational Technologies for Digital Twin in iNEST: Innovation Ecosystem

Saturnia/Vulcania 1 - Stazione Marittima

MS102 Advances in Data-Enhanced Modeling and Applications - Part II of II

Tergeste - Hotel Savoia Excelsior Palace

MS103 Stochastic Computing and Data Assimilation - Part II of II

Oceania AB - Stazione Marittima

MS104 Uncertainty Quantification for Healthcare and Biological Systems - Part I of III

Oceania C - Stazione Marittima

MS105 GPs and Kernel Methods for Scientific Machine Learning - Part I of III

Classica - Stazione Marittima

MS106 Challenges in Inversion and Model Calibration: From UQ to OED- Part III of III

Marconi - Stazione Marittima

MS107 Information Field Theory: Towards a Unified Paradigm for Uncertainty Quantification - Part I of II

Zodiaco - Hotel Savoia Excelsior Palace

MS108 Reduced Order Modeling, Learning, UQ, and Their Interaction - Part II of II

Imperatore - Hotel Savoia Excelsior Palace

MS109 Frequentist and Bayesian Approaches to Optimum Experimental Design - Part II of III

San Giusto - Hotel Savoia Excelsior Palace

MS110 Approaches to Model-Form Uncertainty and Model-Form Error - Part I of III

Savoia - Hotel Savoia Excelsior Palace

MS111 Data-Driven Approximations in the Outer Loop - Part I of III

Excelsior - Hotel Savoia Excelsior Palace

MS112 Multi-Level and Multi-Fidelity Approaches for Forward/Inverse Uncertainty Quantification and Surrogate Model Construction - Part I of II

Riviera - Hotel Savoia Excelsior Palace

MS113 Data Assimilation and Optimal Control: Theory and Algorithms - Part I of II

Sissi - Hotel Savoia Excelsior Palace

MS114 Multilevel and Asymptotic-Preserving Methods for Uncertainty Quantification in Multiscale Systems - Part I of II

Miramare - Hotel Savoia Excelsior Palace

MS115 Particle Methods for Parametric Estimation - Part II of III

Atlantica - Hotel Savoia Excelsior Palace

MS116 Likelihood-Free and Approximate Bayesian Computation Methods: Theory and Practice - Part I of II

Mediterranea - Hotel Savoia Excelsior Palace

MS117 Randomized Algorithms for Uncertainty Quantification - Part I of II

Adriatica - Hotel Savoia Excelsior Palace

MS118 Probabilistic Modeling for Large-Scale Scientific Problems - Part I of II

Pacifica - Hotel Savoia Excelsior Palace

MS119 Recent Advances in Surrogate Modeling for UQ of Large-Scale Simulations - Part III of III

Bellavista - Hotel Savoia Excelsior Palace

MS120 Surrogate Modelling and Data-Driven Approaches for Uncertainty Quantification - Part II of III

Marina - Hotel Savoia Excelsior Palace

MS121 Mathematical Foundations of Ensemble Kalman Methods - Part I of III

Smeralda - Hotel Savoia Excelsior Palace

CP10 Contributed Paper Session

Belvedere - Hotel Savoia Excelsior Palace

7:30 p.m. – 8:30 p.m.

Welcome Reception

Hall and Soppalco - Stazione Marittima

8:30 p.m. – 10:30 p.m.

PP1 Poster Session

Vulcania 2 - Stazione Marittima

Thursday, February 29**7:30 a.m. – 5:00 p.m.**

SIAM Bookstore

Stazione Marittima Foyer - 1st Floor

Badge Pickup and Information Desk

*Stazione Marittima Foyer - 1st Floor***8:30 a.m. – 10:30 a.m.****Concurrent Sessions****MT4** Generative Machine Learning Models for Likelihood Estimation*Saturnia/Vulcania 1 - Stazione Marittima***MS122** Algorithms and Methods for PDEs in Parametric or Uncertain Domains - Part I of III*Tergeste - Hotel Savoia Excelsior Palace***MS123** Nondeterministic Methods for Partial Differential Equations and Machine Learning - Part I of II*Oceania AB - Stazione Marittima***MS124** Uncertainty Quantification for Healthcare and Biological Systems - Part II of III*Oceania C - Stazione Marittima***MS125** GPs and Kernel Methods for Scientific Machine Learning - Part II of III*Classica - Stazione Marittima***MS126** Learning High-Dimensional Functions: Approximation, Sampling, and Algorithms - Part I of III*Marconi - Stazione Marittima***MS127** Information Field Theory: Towards a Unified Paradigm for Uncertainty Quantification - Part II of II*Zodiaco - Hotel Savoia Excelsior Palace***MS128** Theory and Simulation of Failure Probabilities and Rare Events - Part I of IV*Imperatore - Hotel Savoia Excelsior Palace***MS129** Frequentist and Bayesian Approaches to Optimum Experimental Design - Part III of III*San Giusto - Hotel Savoia Excelsior Palace***MS130** Approaches to Model-Form Uncertainty and Model-Form Error - Part II of III*Savoia - Hotel Savoia Excelsior Palace***MS131** Data-Driven Approximations in the Outer Loop - Part II of III*Excelsior - Hotel Savoia Excelsior Palace***MS132** Multi-Level and Multi-Fidelity Approaches for Forward/Inverse Uncertainty Quantification and Surrogate Model Construction - Part II of II*Riviera - Hotel Savoia Excelsior Palace***MS133** Data Assimilation and Optimal Control: Theory and Algorithms - Part II of II*Sissi - Hotel Savoia Excelsior Palace***MS134** Multilevel and Asymptotic-Preserving Methods for Uncertainty Quantification in Multiscale Systems - Part II of II*Miramare - Hotel Savoia Excelsior Palace***MS135** Particle Methods for Parametric Estimation - Part III of III*Atlantica - Hotel Savoia Excelsior Palace***MS136** Likelihood-Free and Approximate Bayesian Computation Methods: Theory and Practice - Part II of II*Mediterranea - Hotel Savoia Excelsior Palace***MS137** Randomized Algorithms for Uncertainty Quantification - Part II of II*Adriatica - Hotel Savoia Excelsior Palace***MS138** Probabilistic Modeling for Large-Scale Scientific Problems - Part II of II*Pacifica - Hotel Savoia Excelsior Palace***MS139** Scientific Machine Learning for Environmental and Climate Solutions - Part I of III*Bellavista - Hotel Savoia Excelsior Palace***MS140** Surrogate Modelling and Data-Driven Approaches for Uncertainty Quantification - Part III of III*Marina - Hotel Savoia Excelsior Palace***MS141** Mathematical Foundations of Ensemble Kalman Methods - Part II of III*Smeralda - Hotel Savoia Excelsior Palace***CP11** Contributed Paper Session*Belvedere - Hotel Savoia Excelsior Palace***10:30 a.m. – 11:00 a.m.**

Coffee Break

*Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco**Hotel Savoia Excelsior Palace - Ground and 1st Floor***11:00 a.m. – 12:00 p.m.****IP5** Statistical Divergences for Functional Data
Andrew Duncan, Imperial College London, United Kingdom*Saturnia/Vulcania 1 - Stazione Marittima***12:00 p.m. – 1:30 p.m.**

Lunch Break

1:30 p.m. – 2:15 p.m.**IP6** Optimal State and Parameter Estimation Algorithms
Olga Mula, Eindhoven University of Technology, Netherlands*Saturnia/Vulcania 1 - Stazione Marittima***2:15 p.m. – 2:30 p.m.**

Intermission

2:30 p.m. – 4:30 p.m.

Lunch Break

Concurrent Sessions**MS142** Algorithms and Methods for PDEs in Parametric or Uncertain Domains - Part II of III*Tergeste - Hotel Savoia Excelsior Palace***MS143** Nondeterministic Methods for Partial Differential Equations and Machine Learning - Part II of II*Oceania AB - Stazione Marittima***MS144** Uncertainty Quantification for Healthcare and Biological Systems - Part III of III*Oceania C - Stazione Marittima***MS145** GPs and Kernel Methods for Scientific Machine Learning - Part III of III*Classica - Stazione Marittima***MS146** Learning High-Dimensional Functions: Approximation, Sampling, and Algorithms - Part II of III*Marconi - Stazione Marittima**Marconi - Stazione Marittima**Marconi - Stazione Marittima***Thursday, February 29****MS147** Uncertainty Quantification in Neural Network Models - Part I of IV*Zodiaco - Hotel Savoia Excelsior Palace***MS148** Theory and Simulation of Failure Probabilities and Rare Events - Part II of IV*Imperatore - Hotel Savoia Excelsior Palace***MS149** Uncertainty Quantification for Digital Twins - Part I of III*San Giusto - Hotel Savoia Excelsior Palace***MS150** Approaches to Model-Form Uncertainty and Model-Form Error - Part III of III*Savoia - Hotel Savoia Excelsior Palace***MS151** Data-Driven Approximations in the Outer Loop - Part III of III*Excelsior - Hotel Savoia Excelsior Palace***MS152** New Approaches to Uncertainty Quantification in Surrogate Modeling and Inverse Problems*Riviera - Hotel Savoia Excelsior Palace***MS153** Low Rank Methods for Random Dynamical Systems and Sequential Data Assimilation - Part I of II*Sissi - Hotel Savoia Excelsior Palace***MS154** Regularization, Stabilization, and Closure Methods for Reduced Order Modeling of Differential Equations Under Uncertainty*Miramare - Hotel Savoia Excelsior Palace***MS155** Advances in Structure Learning with Probabilistic Graphical Models - Part I of II*Atlantica - Hotel Savoia Excelsior Palace***MS156** Handling Uncertainties in Industry - Part I of II*Mediterranea - Hotel Savoia Excelsior Palace***MS157** Scalable Algorithms for Bayesian Inverse Problems - Part I of III*Adriatica - Hotel Savoia Excelsior Palace***MS158** Inference for “Intractable” Scenarios*Pacifica - Hotel Savoia Excelsior Palace***MS159** Scientific Machine Learning for Environmental and Climate Solutions - Part II of III*Bellavista - Hotel Savoia Excelsior Palace***MS160** Software for UQ - Part I of III*Marina - Hotel Savoia Excelsior Palace***MS161** Mathematical Foundations of Ensemble Kalman Methods - Part III of III*Smeralda - Hotel Savoia Excelsior Palace***MS225** UQ in Digital Twins for Aerospace Applications*Saturnia/Vulcania 1 - Stazione Marittima***CP12** Contributed Paper Session
*Belvedere - Hotel Savoia Excelsior Palace***4:30 p.m. – 5:00 p.m.**

Coffee Break

*Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco**Hotel Savoia Excelsior Palace - Ground and 1st Floor***5:00 p.m. – 7:00 p.m.****Concurrent Sessions****PD1** Industrial Panel*Saturnia/Vulcania 1 - Stazione Marittima*

Thursday, February 29

MS162 Algorithms and Methods for PDEs in Parametric or Uncertain Domains - Part III of III
Tergeste - Hotel Savoia Excelsior Palace

MS163 Sequential Monte Carlo Methods in Stochastic Dynamical Systems - Part I of II
Oceania AB - Stazione Marittima

MS164 Probabilistic Approaches to Estimation and Inference in Dynamical Systems - Part I of IV
Oceania C - Stazione Marittima

MS165 Smoothing-Based Optimization for Non-Convex and Noisy Problems
Classica - Stazione Marittima

MS166 Learning High-Dimensional Functions: Approximation, Sampling, and Algorithms- Part III of III
Marconi - Stazione Marittima

MS167 Uncertainty Quantification in Neural Network Models - Part II of IV
Zodiaco - Hotel Savoia Excelsior Palace

MS168 Theory and Simulation of Failure Probabilities and Rare Events - Part III of IV
Imperatore - Hotel Savoia Excelsior Palace

MS169 Uncertainty Quantification for Digital Twins - Part II of III
San Giusto - Hotel Savoia Excelsior Palace

MS170 Uncertainty Quantification for Foundation Models
Savoia - Hotel Savoia Excelsior Palace

MS171 Hierarchical Models and Deep Gaussian Processes - Part I of II
Excelsior - Hotel Savoia Excelsior Palace

MS172 Physics-Based Modeling for Predictive Decision Making under Uncertainty - Part I of II
Riviera - Hotel Savoia Excelsior Palace

MS173 Low Rank Methods for Random Dynamical Systems and Sequential Data Assimilation - Part II of II
Sissi - Hotel Savoia Excelsior Palace

MS174 Gaussian Process Modeling for Inverse Problems - Part I of IV
Miramare - Hotel Savoia Excelsior Palace

MS175 Advances in Structure Learning with Probabilistic Graphical Models - Part II of II
Atlantica - Hotel Savoia Excelsior Palace

MS176 Handling Uncertainties in Industry - Part II of II
Mediterranea - Hotel Savoia Excelsior Palace

MS177 Scalable Algorithms for Bayesian Inverse Problems - Part II of III
Adriatica - Hotel Savoia Excelsior Palace

MS178 Data-Driven Stochastic Non-Markovian Models of Multiscale Dynamical Systems - Part I of II
Pacifica - Hotel Savoia Excelsior Palace

MS179 Scientific Machine Learning for Environmental and Climate Solutions - Part III of III
Bellavista - Hotel Savoia Excelsior Palace

MS180 Software for UQ - Part II of III
Marina - Hotel Savoia Excelsior Palace

MS181 Computational Transport - Part I of II
Smeralda - Hotel Savoia Excelsior Palace

CP13 Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace

Thursday, February 29

7:00 p.m. – 7:15 p.m.
Intermission

7:15 p.m. – 8:15 p.m.
SIAG/UQ Business Meeting
Tergeste - Hotel Savoia Excelsior Palace

7:30 p.m. – 9:00 p.m.
SIAM Student Chapters Networking Event
Trieste City Center

Friday, March 1

7:30 a.m. – 12:00 p.m.
SIAM Bookstore
Stazione Marittima Foyer - 1st Floor

7:30 a.m. – 5:00 p.m.
Badge Pickup and Information Desk
Stazione Marittima Foyer - 1st Floor

8:30 a.m. – 10:30 a.m.
Concurrent Sessions
MT5 PyDMD - Dynamic Mode Decomposition with Python
Saturnia/Vulcania 1 - Stazione Marittima

MS182 Mostly Bayesian Methods for Uncertainty Quantification and Inverse Problems - Part I of III
Tergeste - Hotel Savoia Excelsior Palace

MS183 Sequential Monte Carlo Methods in Stochastic Dynamical Systems - Part II of II
Oceania AB - Stazione Marittima

MS184 Probabilistic Approaches to Estimation and Inference in Dynamical Systems - Part II of IV
Oceania C - Stazione Marittima

MS185 Uncertainty Quantification for Surrogate and Machine Learning Models
Classica - Stazione Marittima

MS186 Algorithms for Forward UQ in Climate Modeling- Part I of III
Marconi - Stazione Marittima

MS187 Uncertainty Quantification in Neural Network Models - Part III of IV
Zodiaco - Hotel Savoia Excelsior Palace

MS188 Theory and Simulation of Failure Probabilities and Rare Events - Part IV of IV
Imperatore - Hotel Savoia Excelsior Palace

MS189 Uncertainty Quantification for Digital Twins - Part III of III
San Giusto - Hotel Savoia Excelsior Palace

MS190 CANCELLED Statistics and Quantification of Uncertainty for Mars Sample Return

MS191 Hierarchical Models and Deep Gaussian Processes - Part II of II
Excelsior - Hotel Savoia Excelsior Palace

MS192 Physics-Based Modeling for Predictive Decision Making under Uncertainty - Part II of II
Riviera - Hotel Savoia Excelsior Palace

Friday, March 1

MS193 Uncertainty Quantification and Data Assimilation for Fluid Dynamics and Related Fields - Part I of II
Sissi - Hotel Savoia Excelsior Palace

MS194 Gaussian Process Modeling for Inverse Problems - Part II of IV
Miramare - Hotel Savoia Excelsior Palace

MS195 Global Sensitivity Analysis and Feature Importance - Part I of II
Atlantica - Hotel Savoia Excelsior Palace

MS197 Scalable Algorithms for Bayesian Inverse Problems - Part III of III
Adriatica - Hotel Savoia Excelsior Palace

MS198 Data-Driven Stochastic Non-Markovian Models of Multiscale Dynamical Systems - Part II of II
Pacifica - Hotel Savoia Excelsior Palace

MS199 Theory and Applications of Physics-Informed Surrogate Modeling - Part I of II
Bellavista - Hotel Savoia Excelsior Palace

MS200 Software for UQ - Part III of III
Marina - Hotel Savoia Excelsior Palace

MS201 Computational Transport - Part II of II
Smeralda - Hotel Savoia Excelsior Palace

MS238 Bayesian Inverse Problems for Machine Learning and Uncertainty Quantification - Part I of II
Mediterranea - Hotel Savoia Excelsior Palace

CP14 Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace

10:30 a.m. – 11:00 a.m.
Coffee Break
Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco
Hotel Savoia Excelsior Palace - Ground and 1st Floor

11:00 a.m. – 12:00 p.m.
Closing Remarks and IP7: A Surrogate Modeling Journey through Gaussian Processes Modeling for Computer Simulation Experiments
Robert Gramacy, Virginia Tech, U.S.
Saturnia/Vulcania 1 - Stazione Marittima

12:00 p.m. – 1:30 p.m.
Lunch Break

1:30 p.m. – 2:15 p.m.
SP1 SIAG/Uncertainty Quantification Early Career Prize Lecture - Perspectives on Stochastic Gradient Descent
Jonas Latz, University of Manchester, United Kingdom
Saturnia/Vulcania 1 - Stazione Marittima

2:15 p.m. – 2:30 p.m.
Intermission

2:30 p.m. – 4:30 p.m.
Concurrent Sessions
MS202 Mostly Bayesian Methods for Uncertainty Quantification and Inverse Problems - Part II of III
Tergeste - Hotel Savoia Excelsior Palace

Friday, March 1

Friday, March 1

MS203 Mitigating Parametric and Model Uncertainty in Systems Biology - Part I of II
Oceania AB - Stazione Marittima

MS204 Probabilistic Approaches to Estimation and Inference in Dynamical Systems - Part III of IV
Oceania C - Stazione Marittima

MS205 Advances in Derivative Based Algorithms in Finite and Infinite Dimensions - Part I of II
Classica - Stazione Marittima

MS206 Algorithms for Forward UQ in Climate Modeling- Part II of III
Marconi - Stazione Marittima

MS207 Uncertainty Quantification in Neural Network Models - Part IV of IV
Zodiaco - Hotel Savoia Excelsior Palace

MS208 Data-Driven Approaches to Rare and Extreme Events - Part I of II
Imperatore - Hotel Savoia Excelsior Palace

MS209 Large-Scale Inverse Problems in Energy Applications
San Giusto - Hotel Savoia Excelsior Palace

MS210 Advances in Bayesian Inverse Problems - Part I of II
Savoia - Hotel Savoia Excelsior Palace

MS211 Uncertainty Quantification in Complex Biological Systems - Part I of II
Excelsior - Hotel Savoia Excelsior Palace

MS212 Uncertainty Quantification at the ExaScale Riviera - *Hotel Savoia Excelsior Palace*

MS213 Uncertainty Quantification and Data Assimilation for Fluid Dynamics and Related Fields - Part II of II
Sissi - Hotel Savoia Excelsior Palace

MS214 Gaussian Process Modeling for Inverse Problems - Part III of IV
Miramare - Hotel Savoia Excelsior Palace

MS215 Global Sensitivity Analysis and Feature Importance - Part II of II
Atlantica - Hotel Savoia Excelsior Palace

MS216 Optimal Design and Decision-Making Under Uncertainty - Part I of II
Mediterranea - Hotel Savoia Excelsior Palace

MS217 Scientific Machine Learning Methods and Applications for Inverse Problem and Data Assimilation - Part I of II
Adriatica - Hotel Savoia Excelsior Palace

MS219 Theory and Applications of Physics-Informed Surrogate Modeling - Part II of II
Bellavista - Hotel Savoia Excelsior Palace

CP15 Contributed Paper Session
Marina - Hotel Savoia Excelsior Palace

CP16 Contributed Paper Session
Smeralda - Hotel Savoia Excelsior Palace

CP17 Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace

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4:30 p.m. – 5:00 p.m.
Coffee Break
Stazione Marittima Foyer - 1st Floor and Upper Foyer - 2nd Floor, Soppalco
Hotel Savoia Excelsior Palace - Ground and 1st Floor

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5:00 p.m. – 7:00 p.m.
Concurrent Sessions

MS220 Mostly Bayesian Methods for Uncertainty Quantification and Inverse Problems - Part III of III
Tergeste - Hotel Savoia Excelsior Palace

MS221 Mitigating Parametric and Model Uncertainty in Systems Biology - Part II of II
Oceania AB - Stazione Marittima

MS222 Probabilistic Approaches to Estimation and Inference in Dynamical Systems - Part IV of IV
Oceania C - Stazione Marittima

MS223 Advances in Derivative Based Algorithms in Finite and Infinite Dimensions- Part II of II
Classica - Stazione Marittima

MS224 Algorithms for Forward UQ in Climate Modeling- Part III of III
Marconi - Stazione Marittima

MS226 Data-Driven Approaches to Rare and Extreme Events - Part II of II
Imperatore - Hotel Savoia Excelsior Palace

MS227 Hybrid Machine Learning Numerical Models with Applications to Climate Uncertainty Quantification
San Giusto - Hotel Savoia Excelsior Palace

MS228 Advances in Bayesian Inverse Problems - Part II of II
Savoia - Hotel Savoia Excelsior Palace

MS229 Uncertainty Quantification in Complex Biological Systems - Part II of II
Excelsior - Hotel Savoia Excelsior Palace

MS230 Conservative and Robust Strategies for Rare Event Probability Estimation
Riviera - Hotel Savoia Excelsior Palace

MS231 Uncertainty Quantification of Thermal-Hydraulics Models in Nuclear Engineering
Sissi - Hotel Savoia Excelsior Palace

MS232 Gaussian Process Modeling for Inverse Problems - Part IV of IV
Miramare - Hotel Savoia Excelsior Palace

MS233 Recent Trends in Sensitivity Analysis
Atlantica - Hotel Savoia Excelsior Palace

MS234 Optimal Design and Decision-Making Under Uncertainty - Part II of II
Mediterranea - Hotel Savoia Excelsior Palace

MS235 Scientific Machine Learning Methods and Applications for Inverse Problem and Data Assimilation - Part II of II
Adriatica - Hotel Savoia Excelsior Palace

MS237 Methods for Stochastic/Parametric Frequency-Domain and Spectral Problems - Part II of II
Pacifica - Hotel Savoia Excelsior Palace

MS239 Bayesian Inverse Problems for Machine Learning and Uncertainty Quantification - Part II of II
Bellavista - Hotel Savoia Excelsior Palace

CP18 Contributed Paper Session
Marina - Hotel Savoia Excelsior Palace

CP19 Contributed Paper Session
Smeralda - Hotel Savoia Excelsior Palace

CP20 Contributed Paper Session
Belvedere - Hotel Savoia Excelsior Palace

ABBREVIATION KEY

CP = Contributed Presentation Session
IP = Invited Plenary Speaker
MS = Minisymposium
MT = Minitutorial
PD = Panel Discussion
PP = Poster Session
SP = Special Lecture

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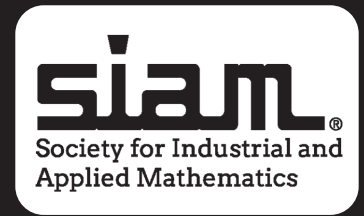


mathLab

SIAM and the Organizing Committee wish to extend their thanks and appreciation to the U.S. National Science Foundation and DOE Office of Advanced Scientific Computing Research for their support.



SIAM Activity Group on Uncertainty Quantification (SIAG/SC)



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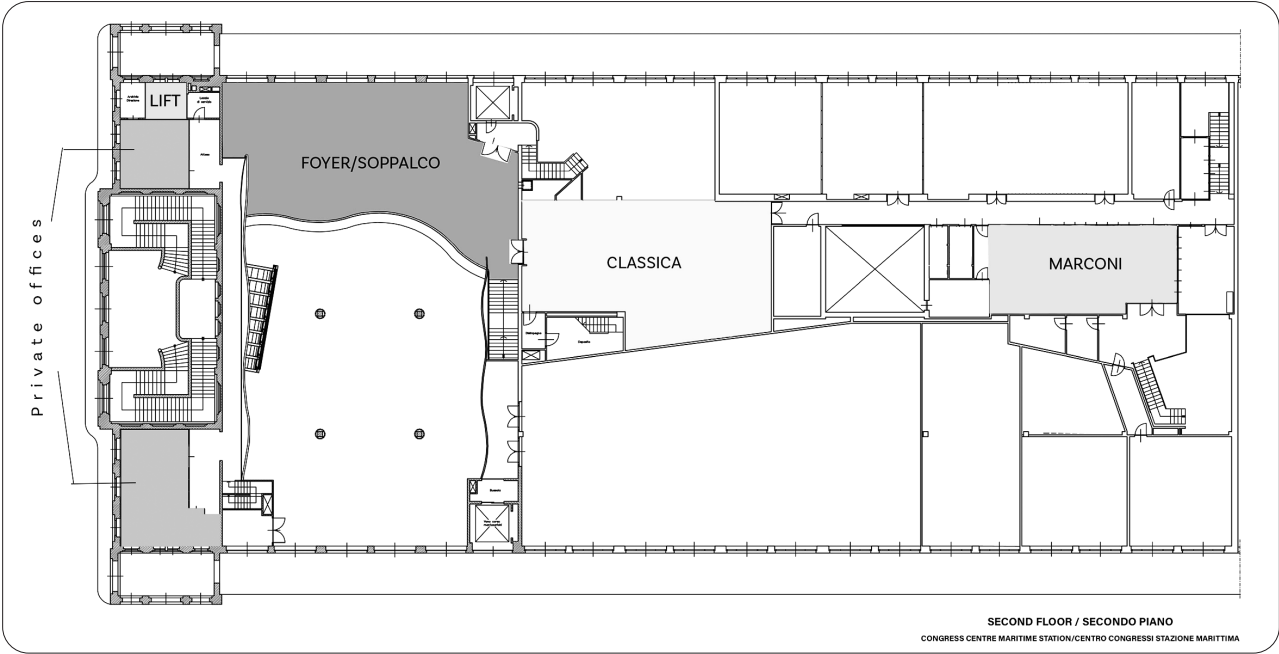
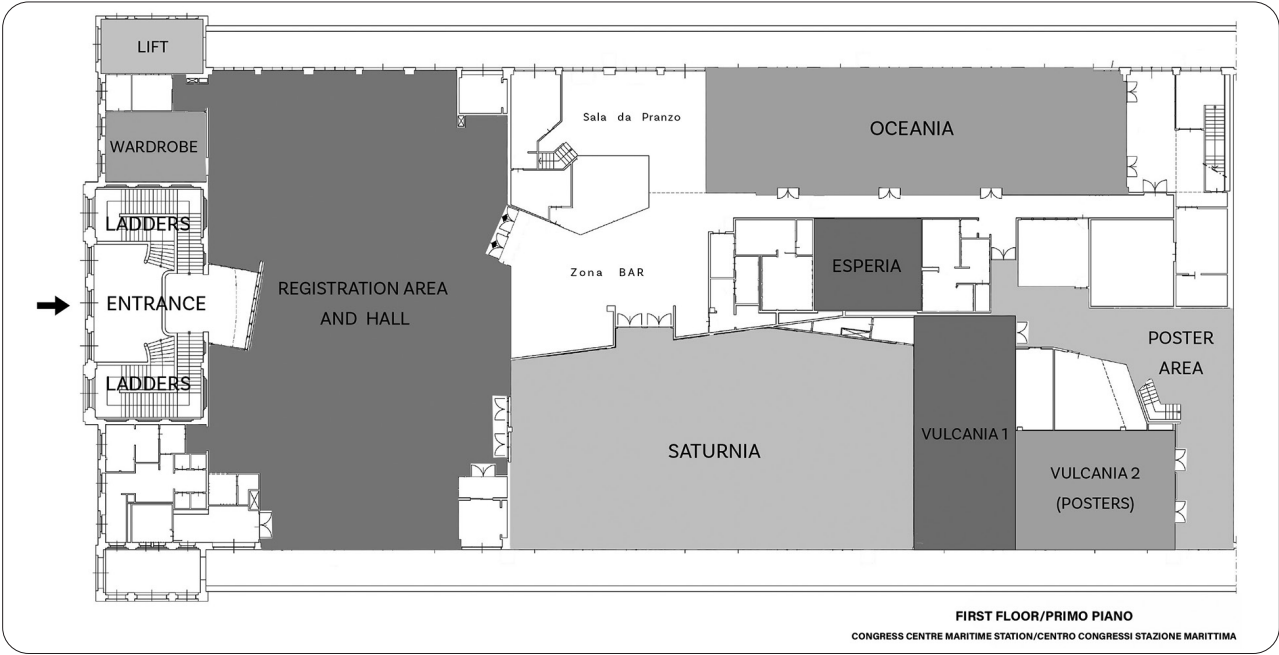
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Stazione Marittima Floor Plans

Stazione Marittima

The following rooms are located in the Stazione Marittima:

Classica, Esperia, Marconi, Oceania AB, Oceania C, Saturnia/Vulcania 1, Soppalco, Vulcania 2



Hotel Savoia Excelsior Palace Floor Plans

Hotel Savoia Excelsior Palace

The following rooms are located in the Hotel Savoia Excelsior Palace:

Adriatica, Atlantica, Belvedere, Bellavista, Excelsior, Imperatore, Marina, Mediterranea, Miramare, Pacifica, Riviera, Tergeste, San Giusto, Savoia, Sissi, Smeralda, Zodiaco

